5 - Disassembly/ Reassembly Instructions

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Table of Contents

Page No

Disassembly Instructions 5
General requirements 5
Detailed disassembly instructions 6

Reassembly 9

Dome Sheet Placement 10
Cleaning 10
Placing the dome sheet to the light guide 10
Placing the light guide assembly onto the PWB 12

Component Replacement Hints 13
Power switch (S2419) 14
Helgo RF-chip (N7500) 14
Hardware accelerator (D1470) 15
UPP (D2800) 15
Flash (D3000) 16
SIM card reader (X2700) 16
System connector (X2002) 17
UEM (D2200) 17
Battery connector (X2000) 18
Bluetooth transceiver 19
Label placement 20

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Disassembly Instructions

General requirements

Use the correct ESD protection before handling the RM-94 product.

Use gloves to handle the RM-94 product.

Required tools:

- torx 6 screwdriver, for disassembly
- torx 6 torque-driver, set to 28Ncm torque for reassembly
- slotted screwdriver
- tweezers
- SRT-6 opening tool
- DC-plug

Note: When shielding lids are removed from the shielding frames of the PWB, new lids must be used in order to close the shielding properly. It is not allowed to re-use the removed ones.

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Detailed disassembly instructions

Needed tools for disassembly.

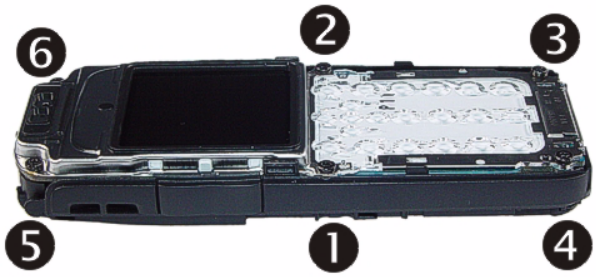
Protect the window with a plastic film.

Remove the C-cover and protect the camera window.

Unlock the side snaps with SRT-6 when opening the A-cover.

Also protect the inner side of the window with a protective film.

Remove the keymat.



Unscrew the six Torx Plus® size 6 screws. For assembly, the reverse order and a Torx Plus® driver with a torque of 28Ncm has to be used.

Take the engine module from the B-cover.

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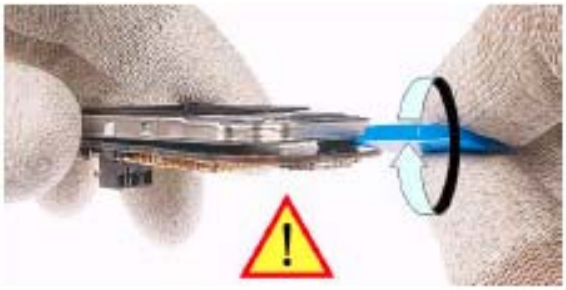
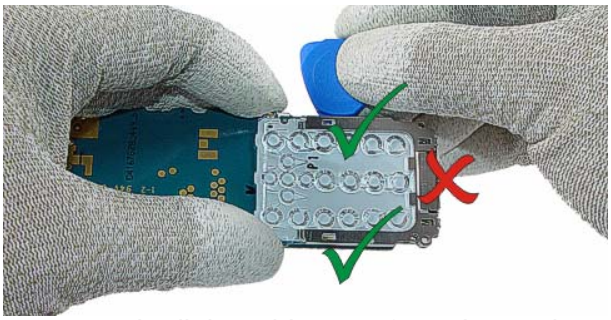


Carefully open the LCD connector. Do not damage the LCD connector.

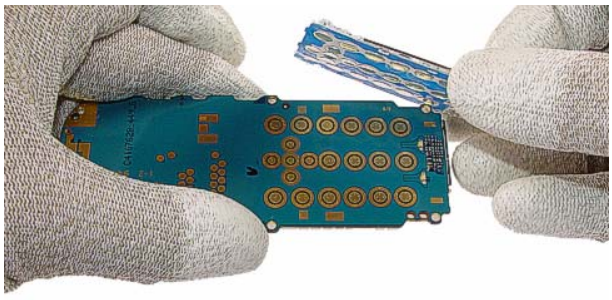
Remove the UI shield assy with the LCD module.

Lever out the LDC module from the UI shield.

Protect the LCD module with a protective film.



Separate the light guide assy from the engine module. Do not use the SRT-6 on the right side to avoid damaging underneath components.



Now, take away the light guide assy.

Remove the DC-jack with a DC-plug.

Remove the microphone with tweezers.

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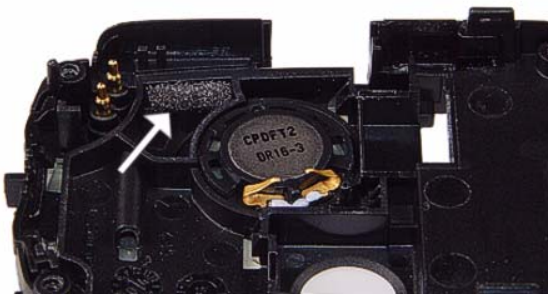
Lever out the vibra motor.

Remove the PDC key.

Remove the volume key.

Remove the Bluetooth antenna with tweezers.

First unlock this side of the IHF lid with SRT-6.



Note that the IHF net stays in place during disassembly.

Release the IHF speaker carefully with a slotted screwdriver. Always use a new speaker adhesive when assembling.

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Note: It is not possible to disassemble the power actuator without damaging it. The power actuator is the same material as B-cover.

Note: If a new B-cover is used, a torque setting of 28Ncm and speed in the range of 400 - 600 rpm is required to cut the new thread.

Caution: The display connector is fragile. Movement of the display module/UI shield assembly can damage the solder joints of connector on the display module or phone PWB. Ensure it is held in place during unscrewing and screwing.

Reassembly

Reassembly should be in reverse order to disassembly unless otherwise stated.

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Dome Sheet Placement

Since the dome sheet has to be removed before every soldering process a new dome sheet needs to be placed between the PWM and light guide.

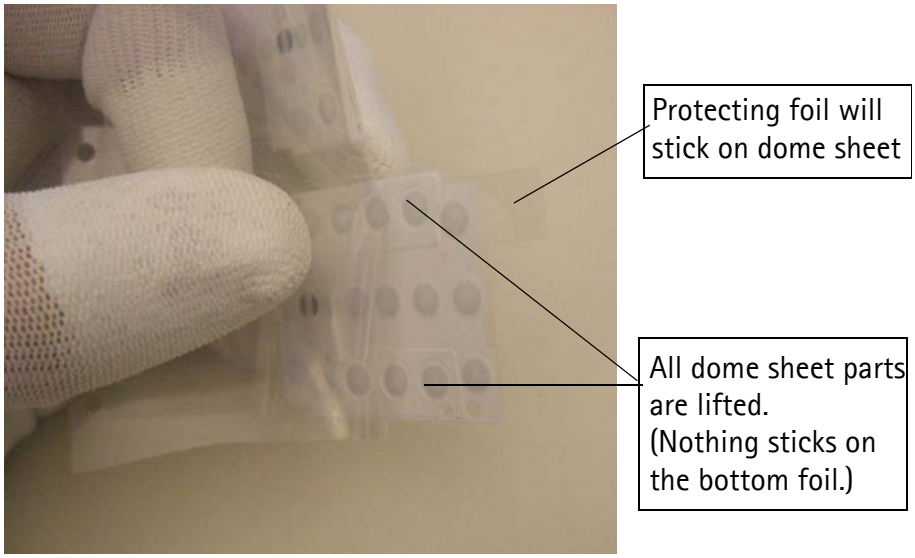
Note: In some regions the light guide assembly (which includes the light guide, the metal frame and the domesheet) will be replaced as one part (this is the preferred procedure). The description below is needed, when the domesheet needs to be replaced separately, which is not the preferred procedure.

Cleaning

The PWB needs to be cleaned and all remaining material from the old dome sheet needs to be removed. In some regions there is the possibility to exchange the dome sheet separately (not together with the light guide assembly), then the light guide needs to be cleaned as well.

Placing the dome sheet to the light guide

The dome sheet is delivered on transparency foil. First step is to remove the dome sheet from the foil, where you need to ensure that the complete dome sheet is lifted and the protecting foil on the other side of the dome sheet still sticks on the dome sheet. Please see picture below:



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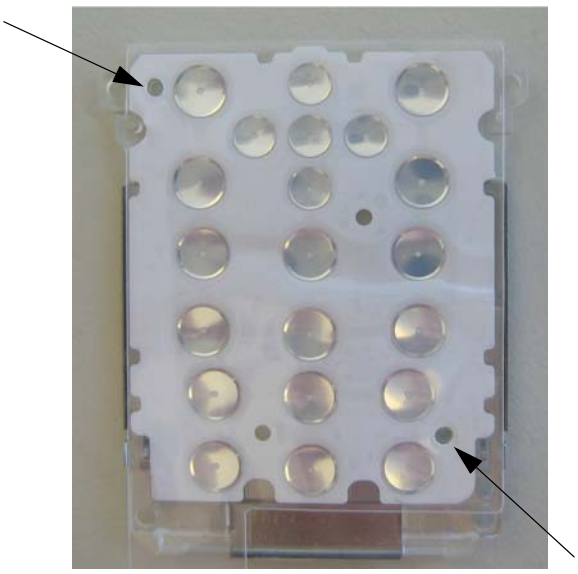
Place the dome sheet onto the cleaned light guide and press them firmly together.

Take care, that the holes of the domesheet align exactly with the holes on the light-guide.



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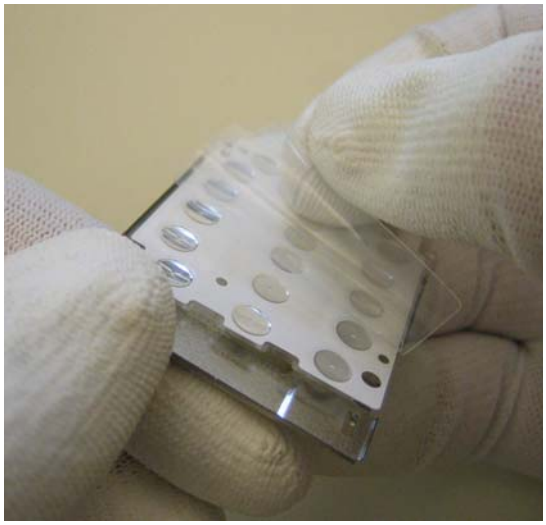
Placing the light guide assembly onto the PWB

In some regions there is the possibility to order the light guide assembly including the dome sheet. In any case the protecting foil needs to be carefully removed from the dome sheet.



Then place the assembly to the PWB and press it firmly together.

Note: It is very important to press the light guide assembly and the PWB properly together at any point. If some points are not pressed properly together dust and humidity will sneak between PWB and dome sheet and will cause corrosion, which lead usability problems and to a defect which might lead to a total loss of the phone.

Now you can be continue with the assembly procedure.

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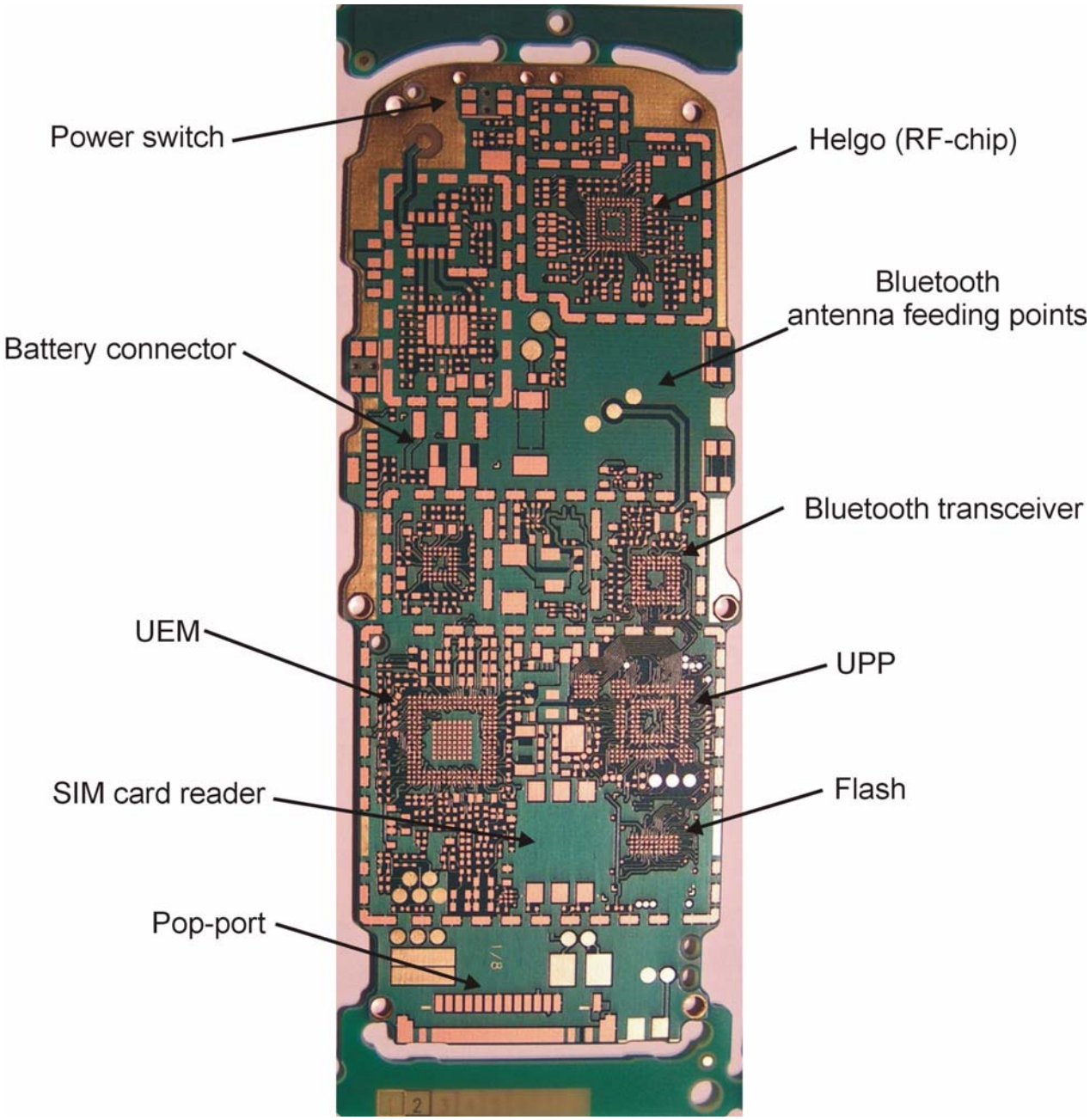
Component Replacement Hints

When exchanging components, all components must be placed properly. There is an extra challenge when:

- Components are manually replaced
- Lead free process is applicable (which is the case for all RM-94 devices)

Therefore, the following replacement support and check possibilities have been implemented:

Figure 1: PWB overview



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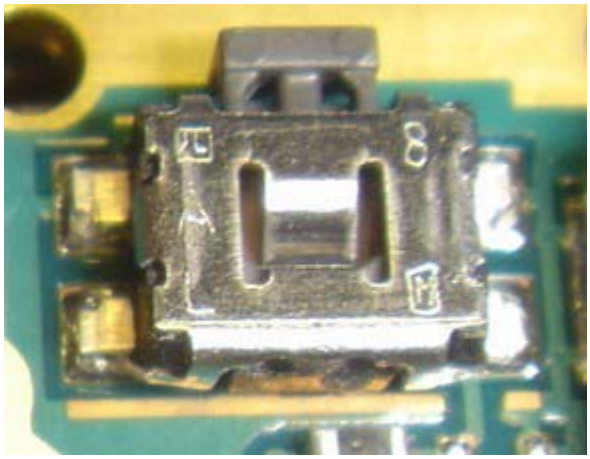
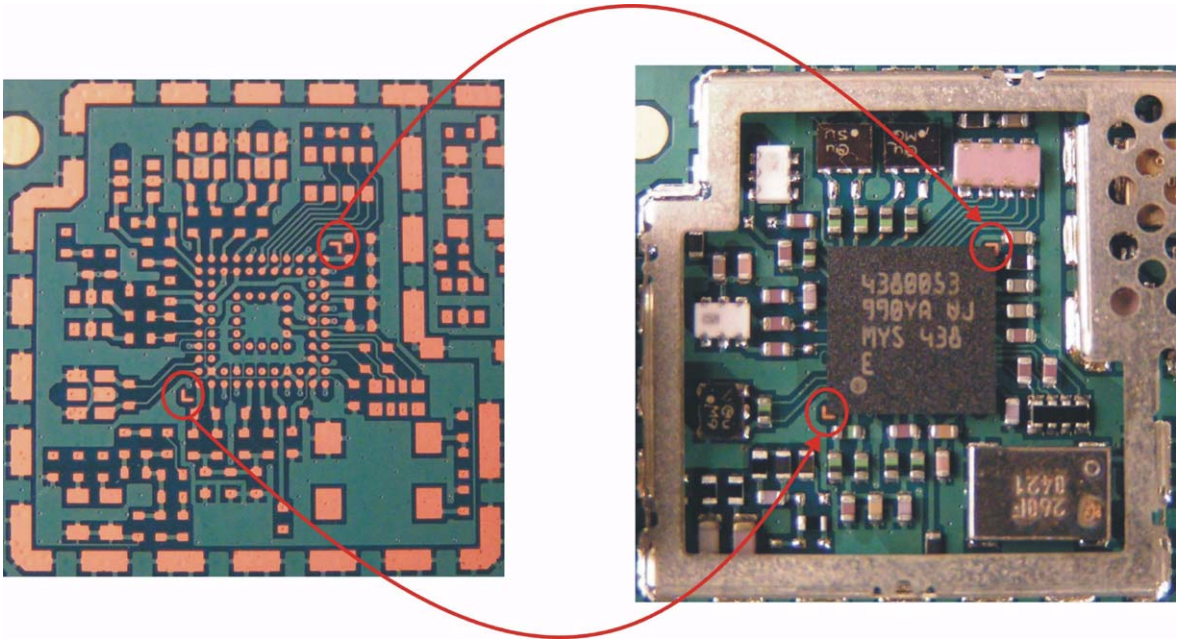
Power switch (S2419)

The power switch replacement has a direct influence to the phone usability and failure rates. Improper placement can cause difficulties to switch the phone on / off or increase the switch's sensitivity when dropping the phone (peeling of the switch or its pads). For proper placement, the line behind the switch needs to fit properly (as shown in the picture below, it must be centric and just visible) even after soldering to get proper functionality of the switch.



Helgo RF-chip (N7500)

There are also corner marks introduced in order to help checking the placement after rework. The placement shall be done with proper equipment. The corner marks indicate proper placement after the soldering process. If the component is not placed properly the re-work process must be repeated until the component fits properly.



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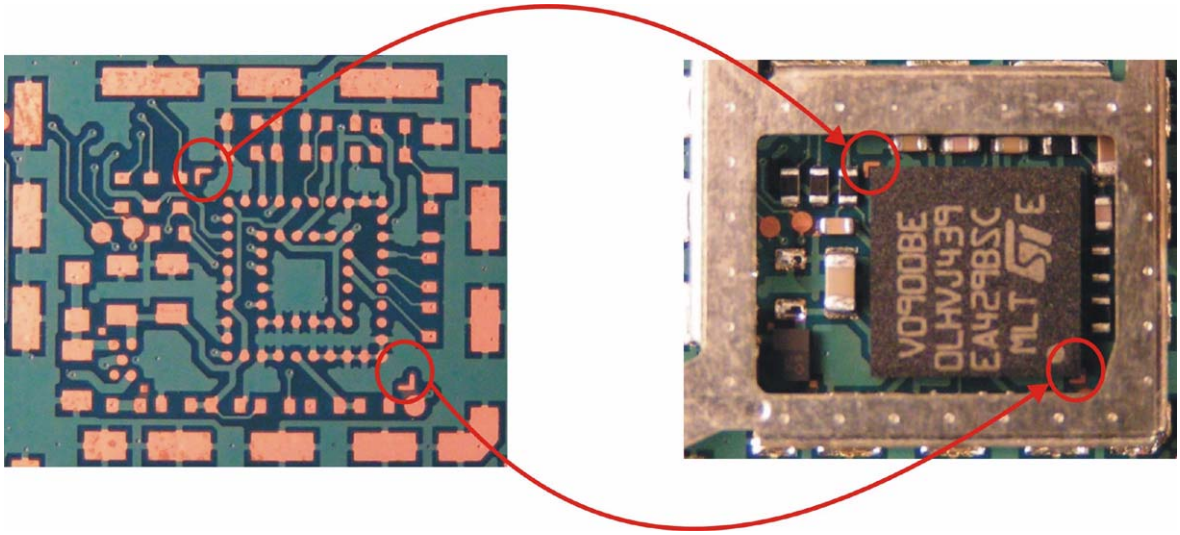
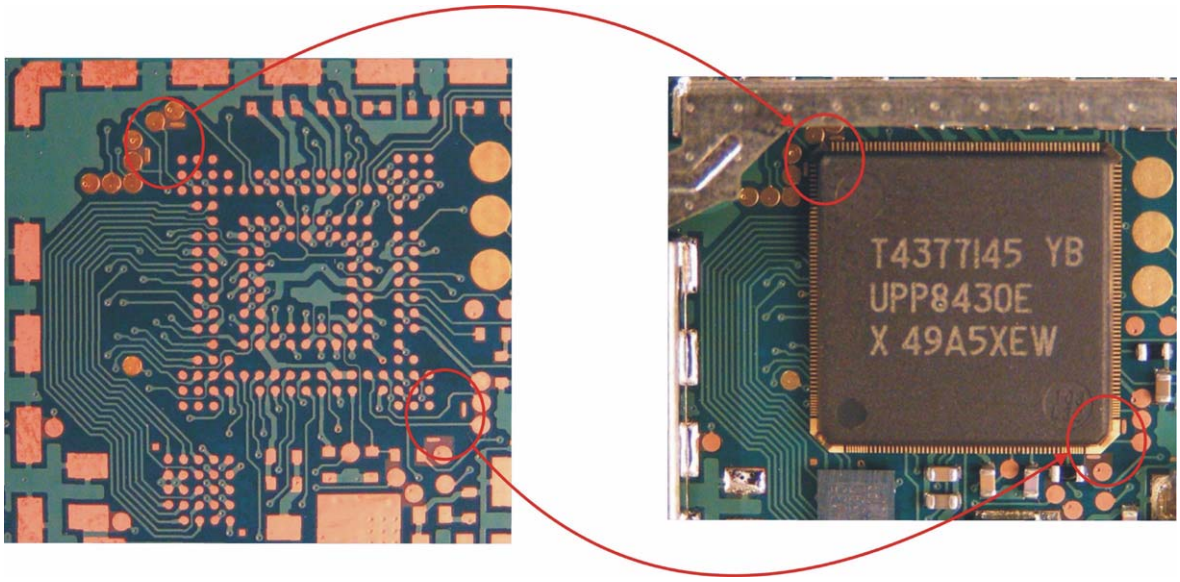
Hardware accelerator (D1470)

There are also corner marks introduced in order to enable checking placement after rework process.



UPP (D2800)

There are also corner marks introduced in order to help checking placement after rework process.



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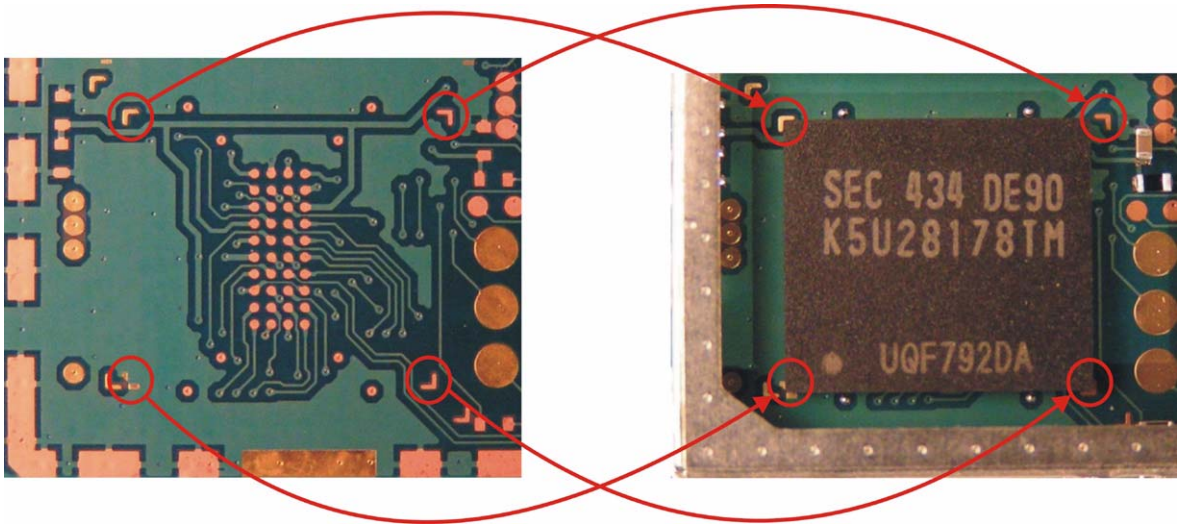
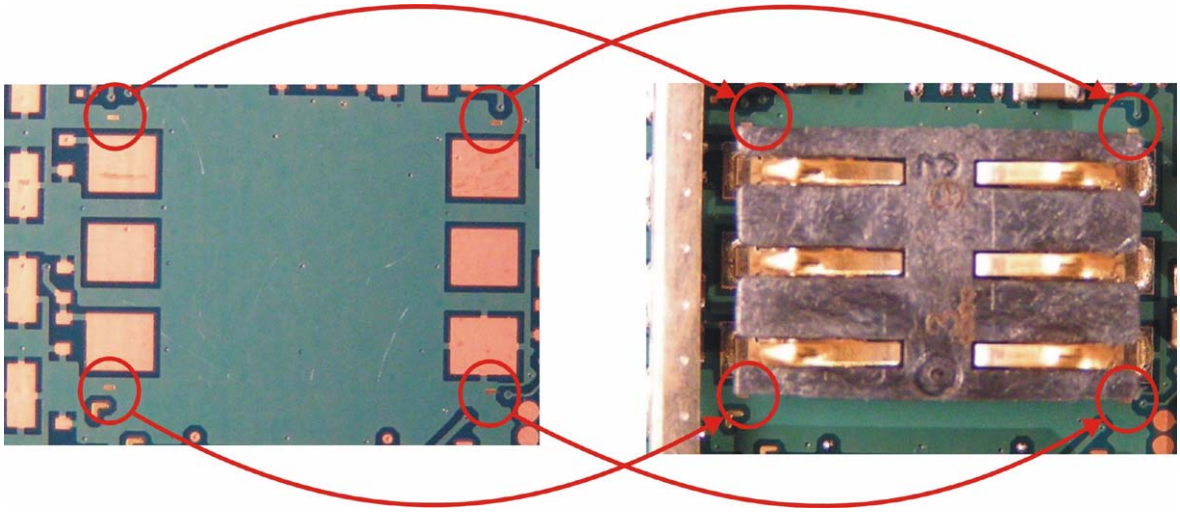
Flash (D3000)

There are some corner marks introduced.



SIM card reader (X2700)

There are some corner marks introduced.



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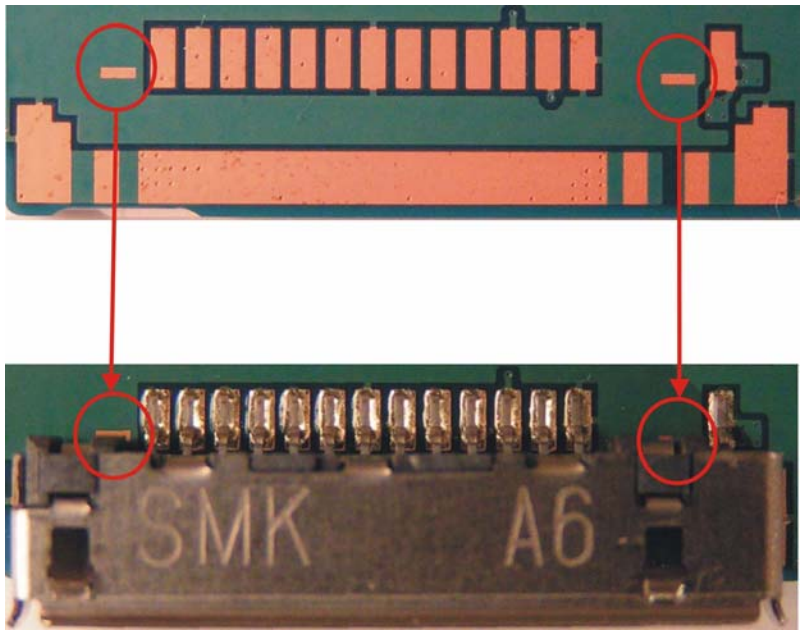
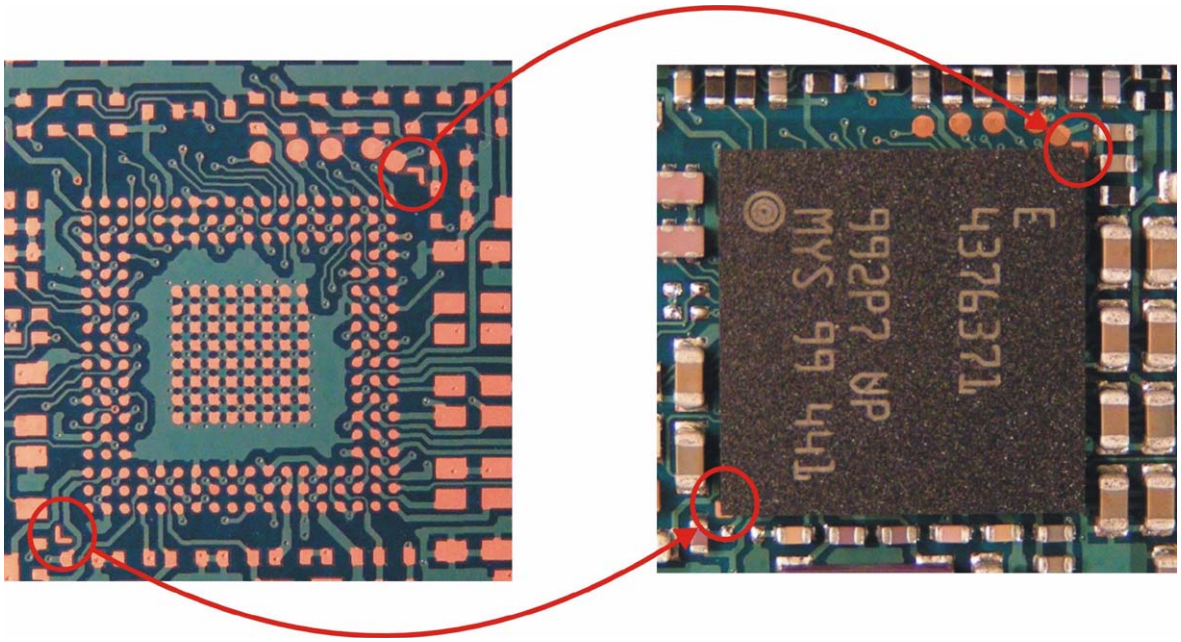
System connector (X2002)

There are also some marks introduced (bars) in order to help placing the system connector and checking placement after rework. The placement bars need to be visible (they can be partly hidden by the connector), but the connector must equally hide them in order to be parallel to the PWB. In addition, the connectors must meet their pads properly as well.



UEM (D2200)

There are also corner marks introduced in order to help checking placement after rework.



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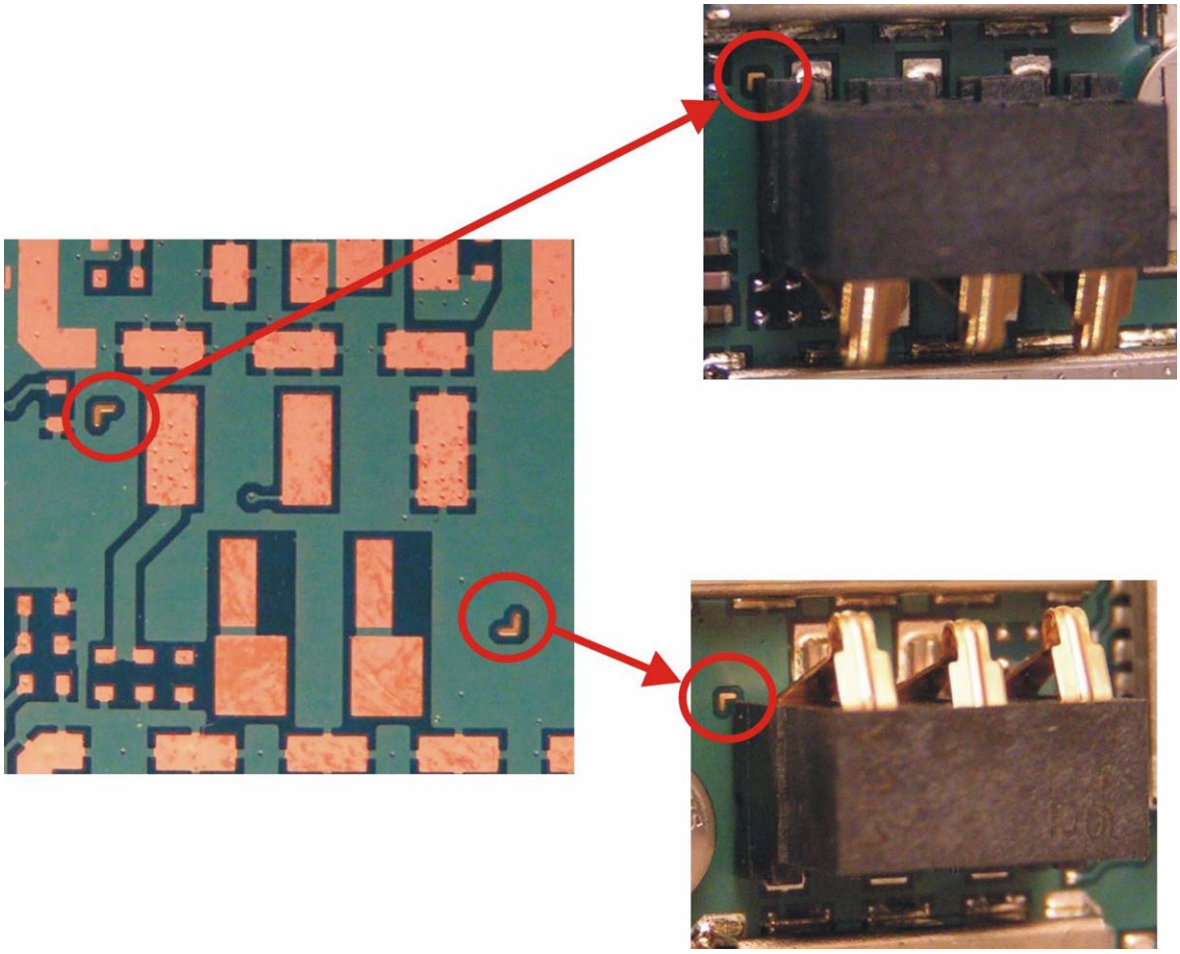
Battery connector (X2000)

There are also some corner marks introduced in order to support placement of the connector and checking placement after rework.



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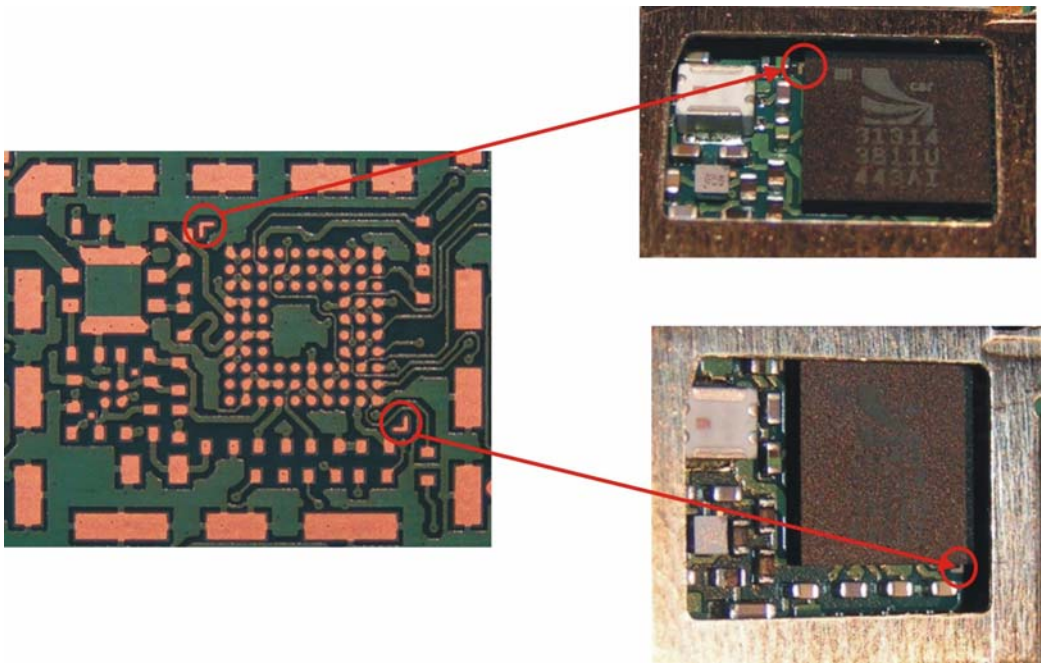
Bluetooth transceiver

There are also some corner marks introduced in order to help checking placement after rework.



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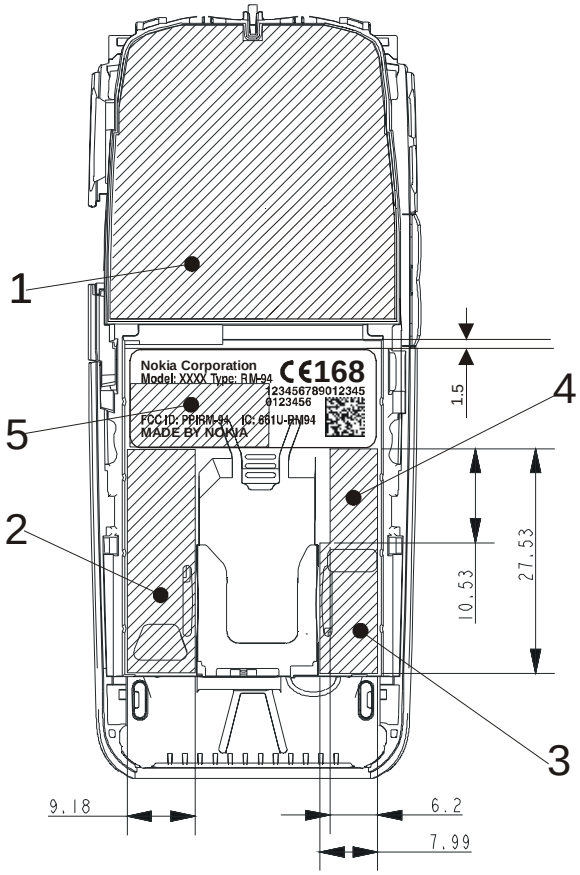
Label placement

Different countries require different labels. This guide explains where it is possible to place these labels.

In the figure below, there are numbered shaded areas (1 - 5) where labels can be placed. On the right hand side there are numbers and labels. The numbers refer to the place where the label is allowed to be placed.

The Taiwan-specific label is metalized and it is very critical to place it properly, so that the phone performance is not affected. For this reason it is allowed to place it on the named areas 2, 3 and 4, but not within the areas 1 and 5. The Chinese label, which is not metalized, has designated area 1.



1
China 12 x 30 not metal

1,2,3,4

Singapore 6x12 not metal

5
Malaysia 10 x 15 metal
(on top of Nokia label)

2,3,4
Taiwan 6 x 13 metal

1,2,3,4

AT&T 6,2 x 25 not metal

Type Label
32,5 x 13 metal

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